intel

product release notes

INTEL TCP/IP RELEASE 3.0 for SYSTEM V RELEASE 3.2

Preface

This document describes the following aspects of Intel TCP/IP Release 3.0 for System V.

- System requirements
- Changes from the previous release
- Known limitations of this release
- MULTIBUS driver configuration

Please take a few moments and read through these notes before installing this release on your system.

DOCUMENT 465488

SHEET REV 1 A

System Requirements

Intel TCP/IP Release 3.0 requires Intel UNIX[1] System V Release 3.2 with the optional NSU package installed. Any TCP/IP package that is already installed must be removed before installing Intel TCP/IP.

Intel TCP/IP may be installed on PC/AT, MULTIBUS I, or MULTIBUS II hardware platforms which have a minimum of 4MB of memory and one of the following Ethernet boards:

PC/AT Systems

- ENET586 from Intel
- PCL2NIA (PCLINK2) from Intel
- 3C501 from 3COM
- 3C503 from 3COM
- WD 8003E from Western Digital

MULTIBUS Systems

- iSBC 552A from Intel
- iSBC 186/530 from Intel

The following disk space is required to install Ethernet drivers and TCP/IP software:

File system	/	*/usr*
Ethernet Drivers	1031K	156K
TCP/IP	1324K	1739K

Improvements From the Previous Release

The following problems have been resolved in TCP/IP Release 3.0:

- **telnet**(1) now works from logins other than the console. This includes the X Window system and virtual terminals.
- UUCP mail can now be received with TCP/IP is installed.
- The **ftpd**(1M) now prevents users listed in the */etc/ftpusers* file from gaining ftp access to the local system.
- The shell script errors that prevented **mkhosts**(1M) from working have been fixed.
- Network logins through **rlogin**(1) now correctly sets the TERM environment variable for **csh**(1).

1. UNIX is a registered trademark of AT&T

- The **timed**(1M) deamon no longer core dumps if it receives a **rdate**(1M) packet from itself.
- The **rshd**(1M) deamon now places a proper HZ value into the environment. This problem caused remote commands, through **rcmd**(1), to return the error message "Bad Hertz Value" when the login on the remote system used **csh**(1).
- Security enhancements were added to **ftpd**(1M), **sendmail**(1M), **rshd**(1M), and **rlogind**(1M).
- The WD8003 Ethernet driver can now be installed through **sysadm**(1M).
- PCL2NIA board drivers are supported and distributed on the Ethernet Drivers Disk. This allows TCP/IP to take advantage of existing hardware that may already be used in your system. In addition, Intel TCP/IP can coexist with SV-OpenNET, allowing both to simultaneously use the same PCL2NIA board.
- Intel TCP/IP supports the iSBC 552A MULTIBUS I and iSBC 186/530 MULTIBUS II Ethernet controller boards and will coexist with SV-OpenNET. See the MULTIBUS Driver Configuration section for more information.

Configuration Changes from Last Release

If you are upgrading from a prior release, there are a few configuration changes you should be aware of.

In previous releases, **tftpd**(1M) was enabled in the default configuration. With this release, the **tftpd**(1M) deamon is not configured in **inetd.conf**(4). This was done to tighten security in the default configuration. **Tftp**(1) allows anyone on the network access to all files and directories with "other" permissions. If your site uses **tftp**(1), you should uncomment this entry in */etc/inetd.conf*.

The domain name is no longer appended to the host name in the TCP startup script */etc/tcp* when using the **hostname**(1) command. This was causing awkward naming conventions for NFS[2] with regard to the */etc/exports* file. The */etc/tcp* file contains an example of appending the domain name that may be uncommented if preferred.

The remove and installations scripts for TCP/IP will remove/overwrite the following configuration files:

```
/etc/hosts
/etc/networks
/etc/gateways
/etc/hosts.equiv
/usr/lib/named/named.hosts
/usr/lib/named/named.local
/usr/lib/named/named.rev
```

2. NFS is a trademark of Sun Microsystems

```
/usr/lib/named/named.soa
/usr/lib/named/named.cashe
```

If you are updating a previous release of Intel TCP/IP, you may want to rename or backup these files **BEFORE** removing the previous release. After TCP/IP Release 3.0 is successfully installed you may restore these files.

Known Problems in this Release

The following are the known problems and limitations with TCP/IP Release 3.0:

- The **ftp**(1) command does not close files correctly in all error cases. This results in ftp reporting the error message "Too many open files".

  This problem can be demonstrated by trying to use the **mput** command of ftp to copy more than 20 files to a directory that does not give you write permission. This error can be reset by exiting the ftp session and starting a new one.

- The **resolver**(4) file */etc/resolv.conf* does not support more than one entry. The manual page states that as many as three name server entries can be specified in this file. If there is more than one name server entry, and a query can not be resolved by the first name server listed in the file, all TCP/IP commands needing host name resolution will fail without giving an error message. For this reason, only one name server should be specified in this file.

- The driver for the WD 8003E Ethernet board used IRQ 3 by default. This is also the IRQ used for the second communication port which is known as COM2 or /dev/tty01. Starting with version 2.2 of System V Release 3.2, COM2 is enabled in the default configuration.

  If you will be using a WD 8003E Ethernet board with the default IRQ level of 3, make sure that the driver for COM2 is disabled by changing the 'Y' on the second line to 'N' in file */etc/conf/sdevice.d/asy* and rebuild the kernel. When you have made the change, the lines should look like this:

```
asy     Y     1     7     1     4     3f8     3ff     0     0
asy     N     1     7     1     3     2f8     2ff     0     0
```

- On MULTIBUS I and II systems, TCP/IP can not be reliably stopped and restarted using the command:

```
/etc/tcp stop
/etc/tcp start
```

  This is due to a documented problem with ps(1) on MULTIBUS I and II systems where processes that are swapped to disk will not be shown in a ps listing. */etc/tcp* uses the information from ps to kill all TCP/IP related process. A variety of error messages will be displayed when restarting TCP/IP if old TCP/IP process are still active. In this situation, the system must be brought down and rebooted to restart TCP/IP.

MULTIBUS Driver Configuration

MULTIBUS drivers for the iSBC 552A and iSBC 186/530 Ethernet controller boards are distributed with Intel UNIX System V Release 3.2 Version 2.2 or later. These drivers allow Intel TCP/IP to be used in MULTIBUS I and II systems. This also allows SV-OpenNET to coexist with Intel TCP/IP and share the same Ethernet controller.

The MULTIBUS drivers that are delivered with SV-OpenNET Release 3.2 do not support Intel TCP/IP. You must use the iSBC 552A and iSBC 186/530 drivers delivered with Intel UNIX System V Release 3.2 Version 2.2 which are compatible with both TCP/IP and SV-OpenNET. If you are using an earlier version of UNIX that did not supply these drivers, contact you sales office for information on obtaining them. Future releases of SV-OpenNET will contain TCP/IP compatible drivers.

After installing the driver for the appropriate Ethernet controller and Intel TCP/IP Release 3.0, you must edit two files to configure TCP/IP to use these boards. You must be the root user to edit both of these file.

First, edit the file */etc/tcp* and look for the series of lines listed below. (Approximantly line 80.)

```
    #
    # Interface configuration -- edit as appropriate.
    #
    ifconfig lo0 localhost
#   ifconfig en0 `uname -n` $NETMASK -trailers $BROADCAST
```

Remove the comment character (#) from the line:

```
#     ifconfig en0 `uname -n` $NETMASK -trailers $BROADCAST
```

So that is looks like this:

```
      ifconfig en0 `uname -n` $NETMASK -trailers $BROADCAST
```

Next, edit the file */etc/strcf* and look for the series of lines listed below. (They are at the end of the file.)

```
    #
    # interfaces
    #
    ip = open /dev/inet/ip
#   cenet ip /dev/ni/clone en 0              # 3b2/NI(10base5)
#   senet ip /dev/pc586_0 /dev/pc586_1 en0   # i386/pc586
#   senetc ip eli /dev/emd0 /dev/emd1 en0    # 3B2/EMD
#   cenet ip /dev/ni en 0                    # i386/NI
#   cenetb ip /dev/edlina0 en0               # PCL2NIA 1552A & 1520
#   uenet ip /dev/abc en 0
#   denet ip /dev/def en 0
#   senet ip /dev/ghi0 /dev/ghi1 en0
    loopback ip
```

Remove the comment character (#) from the line:

```
#     cenetb ip /dev/edlina0 en0               # PCL2NIA 1552A & 1520
```

So that is looks like this:

```
      cenetb ip /dev/edlina0 en0               # PCL2NIA 1552A & 1520
```

The system must be rebooted for these changes to take effect.